

REMARKS

Response to the §102 Rejection of Claims 22-31

In the November 28, 2005 Office Action, the Examiner rejected claims 22-31 under 35 U.S.C. §102(a) as allegedly anticipated by Mo et al., Formation and Properties of Ternary Silicide (Co_xNi_{1-x})Si₂ Thin Films, IEEE 1998, pp. 271-274 (hereinafter "Mo"). Specifically, the Examiner asserted that Mo discloses a first layer CoXSi₂ or NiXSi, where X is an alloying additive Ni (see the Office Action, page 2, line 16, and page 3, line 19).

In response, Applicants have canceled original claims 23 and 28 and amended claims 22 and 27, from which claims 24-26 and 29-31 respectively depend, to positively recite a first layer of CoXSi₂ (as in claim 22) or NiXSi₂ (as in claim 27) with X being "*an alloying additive selected from the group consisting of C, Al, Sc, Ti, V, Cr, Mn, Fe, Cu, Ge, Y, Zr, Nb, Mo, Ru, Rh, Pd, In, Sn, La, Hf, Ta, W, Re, Ir, Pt, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu and mixtures thereof.*" Support for such claim amendments can be found in the canceled original claims 23 and 28 as well as in the instant specification at page 15, first full paragraph.

The Mo reference only discloses formation of CoNiSi₂. Although Mo suggests the use of a Ti interlayer during the silicidation process, the experimental results obtained by Mo indicate that after the first annealing, Ti diffused to the surface to react with N₂ to form TiN, instead of reacting with the silicon in the substrate to form TiSi. The TiN so formed was subsequently etched off, and **the resulting silicide therefore contained only Co and Ni, with no Ti.** (See Mo, page 273, left column, Figure 4 and first paragraph.)

In summary, nothing in Mo teaches or suggests formation of a silicide containing any other alloying additive besides Co and Ni.

Therefore, the Mo reference failed to provide any derivative basis for a first layer of CoXSi_2 or NiXSi_2 with X being an alloying additive selected from the group consisting of C, Al, Sc, Ti, V, Cr, Mn, Fe, Cu, Ge, Y, Zr, Nb, Mo, Ru, Rh, Pd, In, Sn, La, Hf, Ta, W, Re, Ir, Pt, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu and mixtures thereof, as positively recited by the amended claims 22, 24-27, and 29-31 of the present application as amended.

Based on the foregoing, favorable reconsideration and allowance of the amended claims 22, 24-27, and 29-31 of the present application are respectfully requested.

Respectfully submitted,



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